

WHAT IS CLAIMED IS:

1. A method for preparing a plurality of different lubricant oil formulations comprising:
  - a) providing a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive for combination to formulate a lubricating oil composition;
  - b) providing a plurality of test reservoirs;
  - c) combining, under program control, the major amount base oil of lubricating viscosity and lubricating oil additive in varying percentage compositions to provide a plurality of different lubricating oil composition samples; and,
  - d) containing each of the different lubricating oil composition samples in the plurality of test reservoirs.
2. The method of claim 1, wherein the test reservoirs comprise recesses in a unitary body.
3. The method of claim 1, wherein the test reservoirs comprise individual receptacles.
4. The method of claim 1, wherein the combining step (c) is performed within each respective test reservoir.

5. The method of claim 1, wherein the combining step (c) is performed outside of the test reservoirs.

6. The method of claim 1, wherein the combining step (c) comprises metering predetermined respective amounts of the base oil of lubricating viscosity and the lubricating oil additive, the metering being automatically controlled by a computer controller.

7. The method of claim 1, wherein the combining step (c) includes mixing of the base oil of lubricating viscosity and the lubricating oil additive.

8. The method of claim 7, wherein the mixing is accomplished by static mixing.

9. The method of claim 7, wherein the mixing is accomplished by agitation.

10. The method of claim 9, wherein the agitation comprises mechanical stirring.

11. The method of claim 10, wherein the agitation comprises ultrasonic agitation.

12. The method of claim 1, further comprising the step of heating the base oil of lubricating viscosity or lubricating oil additive or both.

13. The method of claim 1, wherein the base oil of lubricating viscosity is a natural or synthetic oil.

14. The method of claim 1, wherein the lubricating oil additive is selected from the group consisting of antioxidants, anti-wear agents, detergents, rust inhibitors, dehazing agents, demulsifying agents, metal deactivating agents, friction modifiers, pour point depressants, antifoaming agents, co-solvents, package compatibilisers, corrosion-inhibitors, ashless dispersants, dyes, extreme pressure agents and mixtures thereof.

15. The method of claim 1, wherein the plurality of lubricating oil compositions includes at least five samples.

16. The method of claim 1, wherein the plurality lubricating oil compositions includes at least 100 samples.

17. The method of claim 1, wherein each of the lubricating oil composition samples has a volume of no more than about 20 ml.

18. The method of claim 1, wherein each of the lubricating oil composition samples has a volume of no more than about 15 ml.

19. The method of claim 1, wherein each of the lubricating oil composition samples has a volume of no more than about 10 ml.

20. The method of claim 1, wherein each of the lubricating oil composition samples has a volume of no more than about 5 ml.

21. The method of claim 1, further comprising analyzing the plurality of lubricating oil compositions.

22. The method of claim 1, further comprising storing information regarding the identity of the lubricating oil compositions in the plurality of combinations of lubricating oil compositions in a database.

23. A system for preparing a plurality of lubricant oil formulations, under program control, which comprises:

a) a supply of at least one base oil of lubricating viscosity;  
b) a supply of at least one lubricating oil additive;  
c) a plurality of test reservoirs;  
d) means for combining selected quantities of the at least one base oil of lubricating viscosity with selected quantities of the at least one lubricating oil additive to form a plurality of lubricating oil composition samples; and ,  
e) means for dispensing each lubricating oil composition sample in a respective test reservoir.

24. The system of claim 23, wherein the base oil of lubricating viscosity is a natural or synthetic oil.

25. The system of claim 23, wherein the lubricating oil additive is selected from the group consisting of antioxidants, anti-wear agents, detergents, rust inhibitors, dehazing agents, demulsifying agents, metal deactivating agents, friction modifiers, pour point depressants, antifoaming agents, co-solvents, package compatibilisers, corrosion-inhibitors, ashless dispersants, dyes, extreme pressure agents and mixtures thereof.

26. The system of claim 23, wherein the test reservoirs comprise recesses in a unitary body.

27. The system of claim 23, wherein the test reservoirs comprise a plurality of individual receptacles.

28. The system of claim 23, further comprising a computer controller for automatically controlling said means for combining and means for dispensing.

29. The system of claim 23, wherein said means for dispensing and said plurality of test reservoirs are movable relative to each other.

30. The system of claim 23, further comprising a computer controlled metering apparatus for metering selected quantities of the base oil and additive for mixing to provide the lubricant oil samples.

31. The system of claim 23, wherein the means for combining comprises a mixer.

32. The system of claim 31, wherein the mixer is a baffle-containing static mixer.
33. The system of claim 31, wherein the mixer is a mechanical stirrer.
34. The system of claim 31, wherein the mixer is an ultrasonic mixer.
35. The system of claim 23, further comprising a heater.
36. The system of claim 23, wherein the means for dispensing includes a mixing chamber and a nozzle extending from the mixing chamber, the nozzle terminating in an outlet opening through which the lubricant oil composition samples are rejected.
37. The system of claim 36, further including means to pressurize the mixing chamber to eject the lubricating oil composition samples.